

**REMARKS**

In the November 17, 2003 Office Action, the Examiner noted that claims 1-21 were pending in the application; rejected claims 1, 3 and 9 under 35 U.S.C. § 102(b); rejected claims 2, 4-6, 8, 10 and 12-15 under 35 U.S.C. § 103(a); and objected to claims 11 and 16-20 as dependent from rejected base claims. In rejecting the claims the Examiner cited U.S. Patents 5,703,667 to Ochiai; 5,341,231 to Yamamoto et al.; 4,373,282 to Wragg; 5,331,530 to Scholz; and 4,737,896 to Mochizuki et al. (Reference A-E, respectively, in the November 17, 2003 Office Action). Claims 1-21 remain in the case. The Examiner's rejections are traversed below.

Claim 7 was indicated as rejected in the third paragraph on page 4 of the Office Action, but was included in the claims to which the Examiner objected in the paragraph on the bottom of page 5 and in the Office Action Summary. It will be assumed that the third paragraph on page 4 of the Office Action should not have identified claim 7 as rejected.

**Newly Cited Prior Art****U.S. Patent 5,703,667 to Ochiai**

The Ochiai patent is directed to a light guide plate assembly utilizing a diffraction grating on a bottom surface with a varying sectional configuration to increase uniformity of light intensity on a top surface of the light guide plate. The sectional configuration varies by changing the cross section of the grooves in the diffraction grating "from sine wave to sawtooth, or gradual increase in the grating part width/non-grating part width ratio ..., in a direction away from one end face 2c on the light source side of the light guide plate 2, that is, in proportion as the quantity of light transmitted from the light source decreases" (column 3, lines 46-51). Sectional views of a prior art illuminator having multi-faceted prisms are illustrated in Figs. 6A-6C and described at column 1, line 12 to column 2, line 17.

**U.S. Patent 5,341,231 to Yamamoto et al.**

The Yamamoto patent is directed to a liquid crystal displayed device with an edge lit light guide. Prior art methods of illumination disclosed in Figs. 1 and 2 include at an angle from the front in Fig. 1 and from the center of the rear in Fig. 2.

**U.S. Patent 4,373,282 to Wragg**

The Wragg patent is directed to a thin-panel illuminator for front-lit displays similar to the display illustrated in Fig. 1 of Yamamoto et al. As illustrated in Fig. 1a of Wragg, a thin panel 10

of glass or plastic has an outer polished surface 12 and an opposite back surface 14 with a "multiplicity of microscopic depressions 16, such as grooves or dimples" (column 3, lines 37-38). "If grooves, their length can be oriented either parallel to end surface 24 or have random orientations. If dimples, their distribution on the surface can be regular or random" (column 3, lines 42-45). A display surface 18 of an item 20, such as "graphics on either glossy or matte paper" (column 3, line 50) "is positioned in approximate contact, but not optical contact with surface 14" (column 3, lines 46-47).

**U.S. Patent 5,331,530 to Scholz**

Scholz patent is directed to an operating theatre lamp having a "substantially point-like light source 13 ... arranged at the center of ... main reflector 14" (column 3, lines 32-40), so that light rays "from the light source fall as a whole radially further outwardly onto the main reflector 14" (column 4, lines 67-68).

**U.S. Patent 4,737,896 to Mochizuki et al.**

The Mochizuki et al. patent is directed to an illumination device for a liquid crystal display panel. The description of the related background art includes reference to an "irregular reflection plate placed at the back of the display panel" (column 1, lines 13-14) in describing one of two types of conventional liquid crystal display panels. From the remainder of the paragraph in which this sentence appears, it appears that this type of conventional display is not described further and the word "irregular" does not appear again in Mochizuki et al. Thus, it is unclear what was "irregular" about the reflection plate in this type of prior art liquid crystal display panel.

**Rejections under 35 U.S.C. § 102(b)**

On pages 2 and 3 of the Office Action, claims 1, 3 and 9 were rejected under 35 U.S.C. § 102(b) as anticipated by Ochiai. In rejecting the claims, the Examiner cited the description of the prior art use of "micro-reflectors [33]" (Office Action page 2, next to last line) as illustrated in Fig. 6C. In Ochiai, reference numeral 33 is used to refer to "a large number of multi-faceted prisms" (column 1, lines 30-21) on bottom surface 32b of light guide plate 32. Nothing has been cited or found to suggest that the prior art devices illustrated in Figs. 6A-6C of Ochiai are any different than the prior art light guide plate described in the subject application on pages 1-3 with reference to Figs. 1(a)-1(c).

Claims 1, 3 and 9 have been amended to recite "micro-reflectors discretely arranged" (e.g., claim 1, lines 6-7) as illustrated in Figs. 3 and 7-10 of the subject application. Nothing has

been cited or found to suggest that the prior art illuminator illustrated in Figs. 6A-6C and described at column 1, line 12 to column 2, line 17 of Ochiai contains anything other than regularly space prisms. These prisms are not micro-reflectors as asserted in the Office Action and are not discretely arranged as now recited in 1, 3 and 9.

One of the advantages of discretely arranged micro-reflectors, as opposed to the conventional prism plate described by Ochiai is that the portions of the back plate that do not contain a micro-reflector allow the light to be easily transmitted to the end of the back plate opposite the light source so that the illumination is more even than in the conventional prism plate described by Ochiai which typically is darker at the side opposite the light source, than at the side adjacent the light source.

Furthermore, in Fig. 6C of Ochiai, the angles of the prism plate are such that the illustrated light rays are first redirected by a gentler slope and then by a more sharply angled slope. However, light rays parallel to the illustrated light rays redirected by the next two angled surfaces to the left of the illustrated light rays would first strike a more sharply angled surface (having the same angle as the second surface struck by the illustrated light ray and then a less sharply angled surface. Claims 1, 3 and 9 all recite that "each of said micro-reflectors includes a first slope and a second slope, said first slope being inclined with respect to an extending plane of said emission face more gently as compared to said second slope" (e.g., claim 1, lines 7-9), where the light is reflected "by said first slope and then ... by said second slope" (e.g., claim 1, last two lines). There is nothing to suggest that the prior art multi-faceted prisms 33 on the bottom surface of the prior art light guide plate 32 described by Ochiai would meet these limitations recited in the independent claims.

For the above reasons, it is submitted that claims 1, 3 and 9, as well as claim 2, 4-6, 8, 10 and 12-15 which depend therefrom patentably distinguish over Ochiai.

#### **Rejections under 35 U.S.C. § 103(a)**

On pages 3-5 of the Office Action, claims 2-6, 8, 10 and 12-15 were rejected over Ochiai in combination with one or more of Wragg, Mochizuki et al., Scholz and Yamamoto et al. However, nothing was cited or has been found in any of these references teaching or suggesting the distinguishing features discussed above with respect to claims 1, 3 and 11. Therefore, it is submitted that claims 2-6, 8, 10 and 12-15 patentably distinguish over the prior art for the reasons discussed above with respect to claims 1, 3 and 9.

**Summary**

It is submitted that the references cited by the Examiner, taken individually or in combination, do not teach or suggest the features of the present claimed invention. Thus, it is submitted that claims 1-21 are in a condition suitable for allowance. Reconsideration of the claims and early Notice of Allowance are earnestly solicited.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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on 5/17/2004  
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Date: 5/17/04